

WHAT IS CLAIMED IS:

1. A method for generating an order plan, comprising:
 - accessing data describing a plurality of priority levels, each priority level comprising at least one item request;
 - 5 accessing data describing a supply chain network comprising a plurality of network components, each network component operable to supply one or more items to satisfy an item request;
 - for each priority level:
 - for each item request of a priority level:
 - 10 planning an order for an item request of a current priority level according to a plurality of recorded unplannable network components, an unplannable network component being unable to satisfy an item request; and
 - determining the unplannable network components for the current priority level;
 - 15 validating the unplannable network components for the current priority level; and
 - recording the validated unplannable network components for the current priority level; and
 - providing an order plan comprising the orders planned for the item requests at each priority level.
2. The method of Claim 1, wherein a network component comprises a buffer operable to store an item.
- 25 3. The method of Claim 1, wherein a network component comprises an operation operable to process an item.
- 30 4. The method of Claim 1, further comprising associating an infeasible period with an unplannable network component during which the unplannable network component is unable to satisfy an item request.

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5. The method of Claim 1, wherein determining the unplannable network components comprises establishing whether a network component comprising a buffer stores a number of items operable to satisfy an item request.

5 6. The method of Claim 1, wherein determining the unplannable network components comprises establishing whether a network component comprising a resource is operable to supply a capacity to an operation.

10 7. The method of Claim 1, wherein determining the unplannable network components comprises establishing whether a network component comprising a supply buffer is operable to supply an item to an operation.

15 8. The method of Claim 1, wherein determining the unplannable network components comprises establishing whether a network component comprising a demand buffer is operable to store an item received from an operation.

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9. A system for generating an order plan, comprising:

a database operable to store:

data describing a plurality of priority levels, each priority level comprising at least one item request; and

5 data describing a supply chain network comprising a plurality of network components, each network component operable to supply a one or more items to satisfy an item request; and

a server coupled to the database and operable to:

access the data describing the priority levels;

10 access the data describing the supply chain network;

for each priority level:

for each item request of a priority level:

15 planning an order for an item request of a current priority level according to a plurality of recorded unplannable network components, an unplannable network component being unable to satisfy an item request; and

determining the unplannable network components for the current priority level;

validating the unplannable network components for the current priority level; and

20 recording the validated unplannable network components for the current priority level in the database; and

provide an order plan comprising the orders planned for the item requests at each priority level.

25 10. The system of Claim 9, wherein a network component comprises a buffer operable to store an item.

11. The system of Claim 9, wherein a network component comprises an operation operable to process an item.

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12. The system of Claim 9, wherein the server is operable to associate an infeasible period with an unplannable network component during which the unplannable network component is unable to satisfy an item request.

5 13. The system of Claim 9, wherein the server is operable to determine the unplannable network components by establishing whether a network component comprising a buffer stores a number of items operable to satisfy an item request.

10 14. The system of Claim 9, wherein the server is operable to determine the unplannable network components by establishing whether a network component comprising a resource is operable to supply a capacity to an operation.

15 15. The system of Claim 9, wherein the server is operable to determine the unplannable network components by establishing whether a network component comprising a supply buffer is operable to supply an item to an operation.

16. The system of Claim 9, wherein the server is operable to determine the unplannable network components by establishing whether a network component comprising a demand buffer is operable to store an item received from an operation.

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17. Logic for generating an order plan, the logic being encoded in media and when executed by a computer operable to:

access data describing a plurality of priority levels, each priority level comprising at least one item request;

5 access data describing a supply chain network comprising a plurality of network components, each network component operable to supply one or more items to satisfy an item request;

for each priority level:

for each item request of a priority level:

10 planning an order for an item request of a current priority level according to a plurality of recorded unplannable network components, an unplannable network component being unable to satisfy an item request; and

determining the unplannable network components for the current priority level;

15 validating the unplannable network components; and

recording the validated unplannable network components for the current priority level; and

20 provide an order plan comprising the orders planned for the item requests at each priority level.

18. The logic of Claim 17, wherein a network component comprises a buffer operable to store an item.

19. The logic of Claim 17, wherein a network component comprises an operation operable to process an item.

20. The logic of Claim 17, wherein the logic is operable to associate a infeasible period with an unplannable network component during which the unplannable network component is unable to satisfy an item request.

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21. The logic of Claim 17, wherein the logic is operable to determine the unplannable network components by establishing whether a network component comprising a buffer stores a number of items operable to satisfy an item request.

5 22. The logic of Claim 17, wherein the logic is operable to determine the unplannable network components by establishing whether a network component comprising a resource is operable to supply a capacity to an operation.

10 23. The logic of Claim 17, wherein the logic is operable to determine the unplannable network components by establishing whether a network component comprising a supply buffer is operable to supply an item to an operation.

15 24. The logic of Claim 17, wherein the logic is operable to determine the unplannable network components by establishing whether a network component comprising a demand buffer is operable to store an item received from an operation.

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25. A system for generating an order plan, comprising:

means for accessing data describing a plurality of priority levels, each priority level comprising at least one item request;

5 means for accessing data describing a supply chain network comprising a plurality of network components, each network component operable to supply one or more items to satisfy an item request;

for each priority level:

for each item request of a priority level:

10 means for planning an order for an item request of a current priority level according to a plurality of recorded unplannable network components, an unplannable network component being unable to satisfy an item request; and

means for determining the unplannable network components for the current priority level;

15 means for validating the unplannable network components for the current priority level; and

means for recording the validated unplannable network components for the current priority level; and

means for providing an order plan comprising the orders planned for the item requests at each priority level.

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26. A method for generating an order plan, comprising:

- accessing data describing a plurality of priority levels, each priority level comprising at least one item request;
- accessing data describing a supply chain network comprising a plurality of network components, the network components comprising a buffer operable to store an item and an operation operable to process an item, each network component operable to supply one or more items to satisfy an item request;
- for each priority level:
 - for each item request of a priority level:
 - planning an order for an item request of a current priority level according to a plurality of recorded unplannable network components, an unplannable network component being unable to satisfy an item request; and
 - determining the unplannable network components for the current priority level by establishing whether a buffer stores a number of items operable to satisfy an item request, whether a resource is operable to supply a capacity to an operation, whether a supply buffer is operable to supply an item to an operation, and whether a demand buffer is operable to store an item received from an operation;
 - associating an infeasible period with an unplannable network component during which the unplannable network component is unable to satisfy an item request
 - validating the unplannable network components for the current priority level;
 - recording the validated unplannable network components for the current priority level; and
 - providing an order plan comprising the orders planned for the item requests at each priority level.

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